REMARKS

Receipt of the Office Action dated July 8, 2005 is acknowledged. Claims 23-29 have been added. Claims 14-29 are pending. Claims 14-17, 20-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Deihl (WO 9413280) ("Deihl") in view of Fassberg et al (EP 0656206) ("Fassberg"). Claims 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Deihl in view of Fassberg and further in view of Kanios et al (5,719,197) ("Kanios").

Claims 14-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending Application No. 09/537,118 in view of Kanios. Reconsideration is earnestly solicited.

The Claims are Patentable over the Prior Art of Record

Claims 14-17, 20-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Deihl in view of Fassberg. The PTO relies on Deihl as teaching a sprayable analgesic composition where the analgesic is capable of being absorbed into the bloodstream through the buccal mucosa. The PTO states that Deihl teaches that the analgesic is ibuprofen and the liquid carrier is aqueous ethanol. The PTO further relies on Table I as showing the concentration range of each ingredient. (Office Action at 3).

The PTO acknowledges that, beyond the disclosed analgesics and solvent, Deihl does not disclose any other suitable active agent or the use of any other solvents. Deihl does not disclose the claimed central nervous system active amine, sulfonyl urea, antibiotic, antifungal, antiviral, sleep inducer, antiasthmatic, antiemetic, histamine H-2 receptor antagonist, barbiturate, prostaglandin, or bronchial dilator. In order to overcome this deficiency, the PTO relies on Fassberg.

As acknowledged by the PTO, Deihl does not disclose any other suitable active agent or the use of any other solvents beyond the specifically disclosed analgesics, acetaminophen and ibuprofen. Deihl does not disclose or suggest the inclusion of the claimed central nervous system active amine, sulfonyl urea, antibiotic, antifungal, antiviral, sleep inducer, antiasthmatic, antiemetic, histamine H-2 receptor antagonist, barbiturate, prostaglandin or bronchial dilator comprising terbutaline or theophyline. There is simply no teaching or suggestion in Deihl to include any active agent other than an analgesic.

Deihl also does not disclose or suggest the claimed propellant free buccal spray composition, containing a pharmacologically active compound and "between 37 and 98.58 percent" of a pharmacologically acceptable solvent. The PTO states that "[t]he table in example I shows the concentration ranges of each ingredient." (Office Action at 3.) Example I of Deihl discloses that the composition includes 1.93% of active agent (12 parts acetaminophen per 618.82 total parts) and 8.08% solvent (50 parts SD alcohol per 618.82 total parts).

In contrast to Deihl, the present claims recite that the propellant free buccal spray composition contains a pharmacologically active compound and "between 37 and 98.58 percent" of a polar solvent. There is nothing in Deihl that discloses or suggests including more than the 8.08% solvent disclosed in Example I.

There is nothing in Fassberg that can overcome the deficiencies in Deihl. Fassberg relates to an inhalation aerosol, propellant-containing spray or powder formulation for oral and/or nasal administration, including actives such as antihistamines, antiallergics, analgesics, antibiotics, steroids, and bronchodialators for treating asthma. Fassberg does not disclose or suggest a propellant free buccal spray composition, to provide transmucosal absorption of a pharmacologically effective

amount of any active compound to the systemic circulatory system through the oral mucosa.

According to the PTO, it would have been obvious "to have looked in the art for other specific solvents suitable for spray formulations of liquid carriers, as taught by Fassberg et al., with reasonable expectations of successfully preparing suitable formulations for various therapies." (Office Action at 4.) The PTO overlooks that the Applicant's claims are to compositions and methods for buccal administration and there is no disclosure or suggestion in the cited references that any active agents other than acetaminophen and ibuprofen could be administered in pharmacologically effective amounts to the systemic circulatory system via absorption through the oral mucosa. There is no suggestion or motivation in Fassberg to apply its active agents or solvents in the method or formulation of Deihl. To the contrary, Fassberg formulates its actives for administration, and administers its actives, via inhalation.

The PTO has not provided any motivation, beyond the impermissible use of Applicant's specification as a roadmap, to combine the relied upon references to arrive at the claimed invention. Courts have generally recognized that a showing of a *prima facie* case of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the reference teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all claim limitations. See e.g., In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999); In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998); Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996). Applicant further notes that in order to establish a *prima facie* case of obviousness, "[i]t is insufficient that the prior art disclosed the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made

by the inventor." Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990). This way, "the inquiry is not whether each element existed in the prior art, but whether the prior art made obvious the invention as a whole for which patentability is claimed." Hartness Int'l, Inc. v. Simplimatic Engineering Co., 819 F.2d 1100, 1108 (Fed. Cir. 1987). Accordingly, a determination of obviousness "must involve more than indiscriminately combining prior art; a motivation or suggestion to combine must exist." Pro-Mold & Tool Co., 75 F.3d at 1573. Here, the PTO has not met its burden of showing a *prima facie* case of obviousness against the pending claims. There is no motivation to combine the buccal spray of Deihl with the nasal/inhalation spray of Fassberg to arrive at the claimed compositions and methods.

The inhalation formulations of Fassberg are not intended to and cannot provide a pharmacologically effective amount of any active systemically via absorption through the oral mucosa. As the PTO acknowledges, the Fassberg formulations contain "pharmaceutically active compounds which are to be delivered by oral inhalation or nasally." (Fassberg at page 5, lines 42-43, emphasis added.)

Moreover, the present claims recite that the compositions are "propellant free." In contrast to the present "propellant free" compositions, Fassberg relates to administering compositions that comprise a propellant which constitutes a majority of the composition. The optional excipients of Fassberg are included to lower the discharge pressure to an acceptable range, and to facilitate the compatibility of the active compound with the propellant. (Page 4, lines 52-53.) Accordingly, without any propellant, there would be no need to include any of the optional polar or non-polar excipients of Fassberg.

Thus, no permissible combination of the cited references would achieve Applicant's pending claims. Moreover, the person having ordinary skill in the art

would have found no motivation to combine the disclosures of Deihl and Fassberg, other than the use of Applicant's specification as a roadmap, to arrive at the claimed invention. In order for an obviousness rejection to be proper, there must be some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the reference teachings. Here, there is none. Thus, claims 14-17, 20-22 are patentable over Deihl in view of Fassberg.

Claims 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Deihl in view of Fassberg and further in view of Kanios.

Deihl and Fassberg are set forth above. As set forth above, neither Deihl or Fassberg discloses or suggests the claimed propellant free buccal spray compositions or methods. The Office Action states that Kanios "teaches formulations that can be in spray format."

In contrast to the present invention, the finished dosage form of Kanios is made of an active agent and either a finite or non-finite pharmaceutical carrier (i.e., the "resulting mixture" in col. 9, lines 21 and 23). There is no disclosure in Kanios that the "resulting mixture" is administered directly to the oral mucosa in any form, much less as a buccal spray. According to Kanios, the composition in question is made into a "finished dosage form" by applying a flexible backing which further defines the size and shape of the finished dosage form, which is, among other things, occlusive to water permeation in vivo. In contrast to the present invention, Kanios never discloses that its finished dosage form is a spray, much less a buccal spray capable of providing a systemic effect.

At column 10, lines 57-65 (cited in the Office Action), Kanios refers to appropriate "sizes" of the composition and the amount of agent per "surface area" of the finished dosage form. That this paragraph of Kanios also refers to mg/ml concentrations for anesthetic agents is in no way a disclosure of a spray final dosage form. The intermediate resulting mixture of Kanios will have a concentration of active when added to an adhesive, backed by a flexible backing, or otherwise made into the finite finished dosage form of Kanios. Therefore, simply because an anesthetic agent concentration is disclosed, does not disclose or suggest a finished dosage form suitable for spraying on the oral mucosa. Such a spray dosage form is never contemplated or taught by Kanios.

While Kanios refers to a shotgun list of pharmaceutical agents, there is, however, no disclosure or suggestion of a buccal spray dosage form capable of providing transmucosal absorption of an active compound to the systemic circulatory system through the oral mucosa, as presently claimed. In short, there is nothing in Kanios to overcome the deficiencies in Deihl and Fassberg.

For the above reasons, Applicant respectfully requests that the rejections under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

New claims 23-29 are directed to methods for administering an effective amount of a pharmacologically active compound to a mammal to provide transmucosal absorption of a pharmacologically effective amount of the active compound through the oral mucosa of the mammal to the systemic circulatory system of the mammal. The prior art of record does not disclose or suggest the claimed methods in claims 23-29. For at least this reason, these claims are patentable over the prior art of record.

Obviousness-type Double Patenting Rejection

Claims 14-22 stand rejected under the judicially created doctrine of obviousness-type double patenting over the claims of co-pending application no. 09/537,118 in view of Kanios et al. (U.S. Patent No. 5,719,197). Reconsideration of the provisional rejection is requested. First, Applicant cannot determine the scope of the rejection as the Examiner does not identify which claims of the co-pending application no. 09/537,118 that would have rendered obvious claims 14-22 of the current application. Secondly, Applicant notes that neither application has been allowed. Therefore, Applicant respectfully requests that the objection be held in abeyance until such time when allowable subject matter is identified in either this application of the co-pending application no. 09/537,118.

Conclusion

In view of the above, Applicant believes the pending application is in condition for allowance. If the Examiner should believe that anything further may be required to place this application in even better form for allowance, she is cordially invited to telephone the Applicant's undersigned representative.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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